

## **Ballistic versus diffusive magnetoresistance of a magnetic point contact**

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### **Abstract**

The quasiclassical theory of a nanosize point contacts (PC's) between two ferromagnets is developed. The maximum available magnetoresistance values in PC's are calculated for ballistic versus diffusive transport through the area of a contact. In the ballistic regime the magnetoresistance in excess of a few hundred percent is obtained for the iron-group ferromagnets. The necessary conditions for realization of so large a magnetoresistance in PC's, and the experimental results by García et al. are discussed.

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